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ABSTRACT

This study evaluated a childrens' school program which was part of a residential facility for children, aged 6-13, defined as being emotionally disturbed. The length of stay (LOS) at the facility was a major concern. The LOS was studied to see if it was related to changes in I.Q. and achievement scores from admission to discharge. Another variable, rate gain, or the amount of achievement gains made per month was also investigated. The data did indicate that children were able to make significant gains during their stay in treatment. It was noted, however, that those who came to the center with the highest I.Q. and achievement scores stayed the shortest times. But those who made the largest rate gains stayed 7 to 9 months. These results were reviewed and further discussed. (Author/CTM)

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EVALUATION OF A RESIDENTIAL TREATMENT SCHOOL

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Children who become residential care patients in mental health facilities usually arrive there with a history of services by other agencies. These children have often been to more than one mental health center as outpatients, a family service center or several private practitioners, such as social workers, psychologists, or psychiatrists. Many service elements have, most likely, been involved (Nelson, Johnson, & Singer, 1977).

Another common element, perhaps the most critical, has been the school. At the Adler Center, where this study took place, 90% of the children started their mental health agency pathway from the community schools. Disruptive behavior is the usual reason and often this is compounded with poor school performance. It is further compounded as it is often that a child's poor performance leads to the disruptive behavior and not visa versa (O'Brien and Nelson, 1977). As the children process through the agency system(s), it becomes more probable that they move even further and further behind in their school performance.

As a consequence, the residential school program must be more than a mere ancillary program to the overall residential program. The school should take on the important adjunct aspect of checking the negative learning pattern and then programming ways and means to reverse the pattern. It is therefore essential to evaluate the school offerings and program articulations in terms of its ability to alter a child's negative growth pattern and to redirect it into one of positive growth. This study will evaluate such a situation.

The Herman M. Adler Mental Health Center, a facility of the Illinois Department of Mental Health and Development Disabilities, provides residential treatment services for the developmentally disabled, emotionally disturbed and socially maladjusted children up to thirteen years of age in a sixteen county, East Central Illinois area. The program is geared for a short-term (usually not exceeding one year) residential care. Since its opening in 1968, a total of 1,012 children have been served. Approximately 50+ percent of that number have been served by the Adler Center School facility.

In this study, a random population of 55 children who had been in residence varying lengths of time and who had been discharged back to their community between 1973 and 1976 was used. The intake age ranged from 6.66 years to 13.83 years (mean age 10.85). The I.Q. ranged from 60 to 117 (mean I.Q = 92.44). Academic ability varied from pre-kindergarten to seventh grade. The length of stay (LOS) varied with the needs of the individual child (average stay = 8.01 months). LOS was a critical concern because the population of Adler Center children was changing to admit more children who were wards of the State Department of Children and Family Services; and as a consequence, these children, who had no definite target placement (hopefully foster placement would be found) at time of discharge were beginning to stay longer. The central question asked: is a longer stay either needed and/or detrimental? For the purpose of this study, the children were divided into three groups: those who had been in residence from 4 to 6 months (n = 20, mean stay 5.2 months); 7 to 9 months (n = 20, mean stay 8.1 months); and 10 or more months (n = 15, mean stay 11.6 months).

Results

A one-way analysis of variance with repeated measures was used to

analyze the length of stay (LOS) by the changes in the dependent variables during the childrens' residency at Adler Center. The repeated measures were the intake and discharge testing scores of the WISC and the WRAT (reading and arithmetic).

Insert Table 1 about here

All the dependent variables, I.Q., WRAT, Reading and Arithmetic scores, had 2 significant main effects and significant interactions. The changes from Intake to Discharge were significant ($p \leq .003$) for I.Q. where the score increased from 89.7 to 95.5. There were differential effects however, within the Length of Stay factor and interaction. Clearly, the higher one's I.Q., the shorter the residential stay, but the greatest gains were made in the group that stayed the longest (from 74.6 to 84.4).

Similar results occured in the achievements scores. Those children that entered with the highest reading and arithmetic achievement scores stayed the shortest time in residential treatment. There was a variation in the interaction effect in that the greatest gains were recorded in the 10+ group, and the 7 to 9 month group, with the short stay group showing the smallest gains. These results could also be interpreted in terms of a regression effect - perhaps the low group had already arrived at its base level and had no other way to go but up.

Insert Table 2 about here

The scores from Intake to Discharge also show a significant main effect. In reading, the scores went from 41.6 to 53.6 and in arithmetic,

from 38.9 to 50.5. These gains are over 12 months and that should be an expected gain for normal functioning children. However, the children here at Adler were not functioning at normal rates: the concept of rate gain became an important consideration.

Rate Gain

Academic articulation, in general, is so structured that students should make significant academic achievement gains each year based on a grade achievement of one year for each year devoted to academic learning. In other words, the grade level gains of one year, e.g. from grade four to five in reading, or arithmetic are, in fact, the expected normal gains for children during one year of academic schooling. The point of significance for this evaluation review is that the children at Adler have not been functioning at the expected normal rate prior to coming to Adler Center.

To measure the learning rate of a child attending the Adler Center with a CA of 10 years, 6.5 years (to compensate for those years prior to attending school) were subtracted, giving a conservative estimate of his grade level as 3.5. The score achieved on the WRAT for reading would be 3.5 years. This was divided by the estimate of his expected grade level based on the CA which was again 3.5. The resulting ratio was 3.5/3.5 = 1. A score of 1 would indicate that the child had been achieving in the reading area at a normal or expected level.

The data in Table 3 indicated that on Intake, the Adler Center children had a mean ratio of .778:1 in reading, and .751:1 in arithmetic. These children had been in a decelerating achievement pattern, or in other words, for each month of academic learning, they had fallen further and further behind in their levels of academic achievement.

Insert Table 3 about here

At discharge, testings indicated the learning rates to be 1.52:1 in reading; and 1.46:1 in arithmetic. Not only had the deceleration rates stopped, but the children began functioning at an increased rate of learning. At the time of discharge, they were learning at a rate of 1.5:1 months in academic for each month of academic exposure.

The rate gains showed a different pattern for the groups than did the raw scores. Clearly, those children who stayed the shortest time did come to Adler with the highest rate gains, even though the rate was below 1 and declining. But the group that made the highest rate gains were those that stayed 7 to 9 months and those that made the lowest gains stayed the longest, over 10 months. This could mean that 7 to 9 months is the optimal stay for improvement in academic performance. But there are more complexities involved in a residential stay so that statement of optimal stay had best remain s tentative hypothesis for future work.

Conclusion

The data presented here indicates that children from negative prior experiences in academic situations and with decelerating academic patterns can, under intensive academic programming, have their patterns reversed. This is a positive evaluation for the school in specific, but it does raise some general considerations; the most important being generalizability. Will these positive patterns be continued after the child leaves Adler and enters the community school?

The Adler school faculty includes five special education classes, two

speech and language therapists, two diagnosticians, one research associate and two educators - one who focuses on manual and shop activities and the other as a tutor in reading. All these people focus on 35 - 45 children. Due to current community school funding problems, community schools would most likely find it difficult to reproduce that Adler program. In fact, rumors are often spread around Adler that the department of mental health finds the program too expensive.

A detailed discussion of these issues goes beyond the scope of this paper, but one must consider the fact of whether a child's gains made at Adler will be continued out in the community and that concern must focus on the services available in the community. One might also ask, if these services had been available out in the community would the child have had to be admitted to a residential facility in the first place.

So then, one might ask if the evaluation of a residential facility should involve all of these other considerations and questions. The answer is no if your focus is on the evaluation of the success of the residential school and the answer is yes if your focus is on the success on the child.

Table 1

Changes in I.Q. Scores
During Adler Residential Stay

Full Scale I.Q.

Length of Stay	N	Intake	Discharge	Mean
4 - 6 months	13	96.9	100.6	98.8
7 - 9 months	18	94.7	99.2	96.9
10+	12	74.6	84.4	79.5
		89.7	95.5	

		Df	F	p
Length of Stay	A	2	6.6579	.003
Subjects within groups	C	40		
I.Q.	B	1	36.3285	.001
A x B		2	3.5659	.05
B x C		40		

Table 2

Changes in Achievement Scores
During Adler Residential Stay

Reading

Length of Stay	N	Intake	Discharge	Mean
4 - 6 months	20	55.3	64	59.6
7 - 9 months	20	36.35	50	43.6
10+	15	30.47	43.7	37.1
		41.6	53.6	

		Df	F	p
Length of stay	A	2	3.4321	.05
Subjects within groups	C	52		
Reading	B	1	221.1934	.001
A x B		2	5.1123	.01
B x C		52		

Arithmetic

Length of Stay	N	Intake	Discharge	Mean
4 - 6 months	20	49.7	57.6	53.6
7 - 9 months	20	35.9	49.8	42.8
10+	15	28.5	42.0	35.2
		38.9	50.5	

		Df	F	p
Length of Stay	A	2	2.794	.07
Subjects within groups	C	52		
Arithmetic	B	1	183.3161	.001
A x B		2	5.3486	.01
B x C		52		

Table 3

Learning Rate Comparison Chart

Reading Learning rate

LOS	Pre Adler Community	Post Adler
4-6	.966	1.638
7-9	.801	1.806
10+	.567	1.106

Arithmetic Learning Rate

LOS	Pre Adler Community	Post Adler
4-6	.840	1.479
7-9	.799	1.778
10+	.613	1.137

Over-all Learning Rate Comparison

Prior to Adler	Post Adler
.75	1.48

Learning Rate: The expectancy is that the youngster will advance in the amount he has learned, or the rate of increased skill at the rate of 1 month advancement for each month in learning attendance.

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This study was an attempt to evaluate a childrens' school program which was part of a residential facility for children defined as being emotionally disturbed.

The length of stay (LOS) at the facility was a major concern. The LOS was studied to see if it was related to changes in I.Q. and achievement scores from admission to discharge. Another variable, rate gain, or the amount of achievement gains made per unit/month was also investigated.

The data did indicate that children were able to make significant gains during their stay in treatment. It was noted, however, that those who came to the center with the highest I.Q. and achievement scores stayed the shortest times. But those who made the largest rate gains stayed 7 to 9 months. These results were reviewed and further discussed.